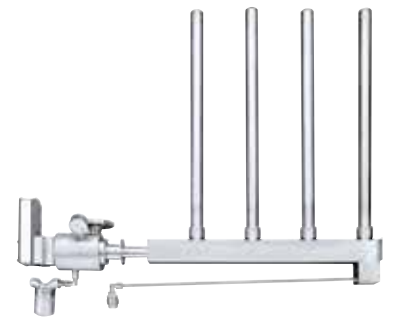




# ABSOLUTELY WATERTIGHT!

Steam distribution system for available steam  
Condair **ESCO**



Humidification and evaporative cooling

 **condair**

# Steam distribution system for available steam

## Patented main-flow nozzles facilitate condensate-free steam discharge

Main-flow nozzles remove steam from the middle of the distribution pipes where it is hot and condensate-free. This ensures that the air hoses behind the distribution system remain dry.



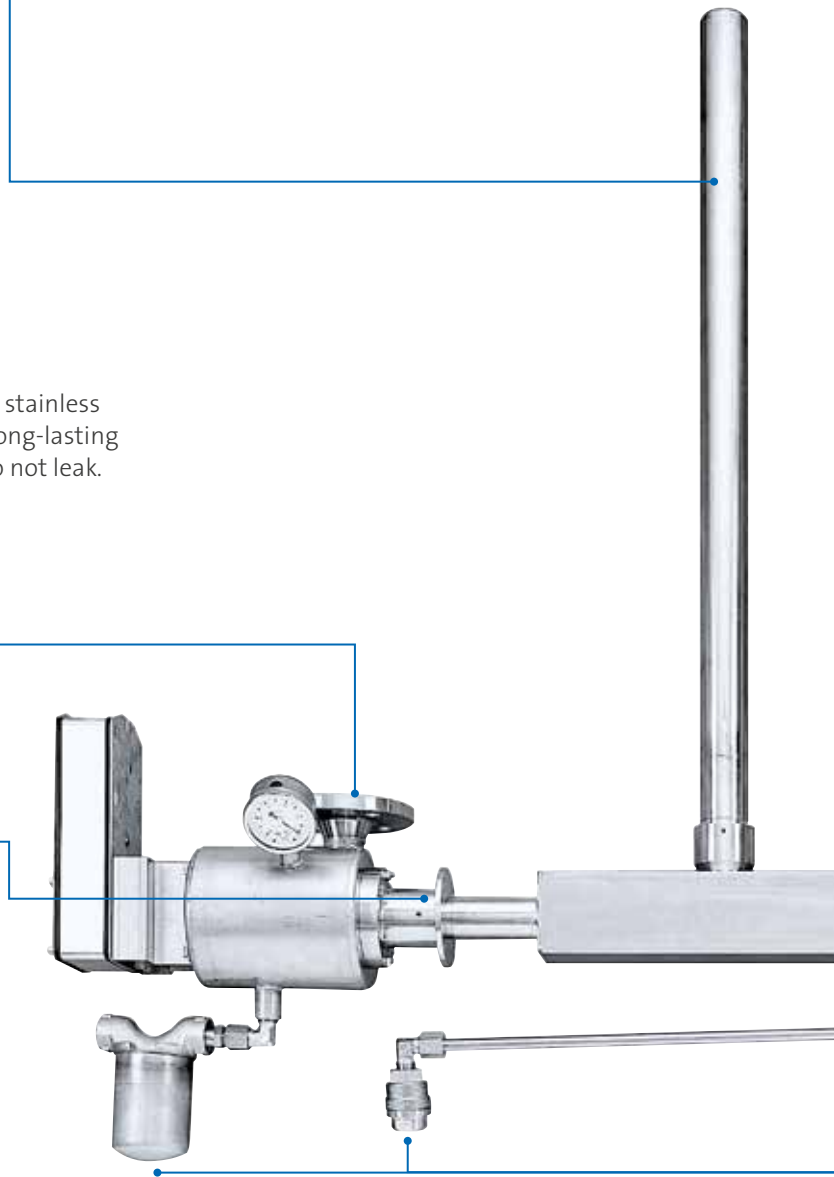
The nozzles are made of solid stainless steel. They work reliably, are long-lasting and resistant to aging, and do not leak.

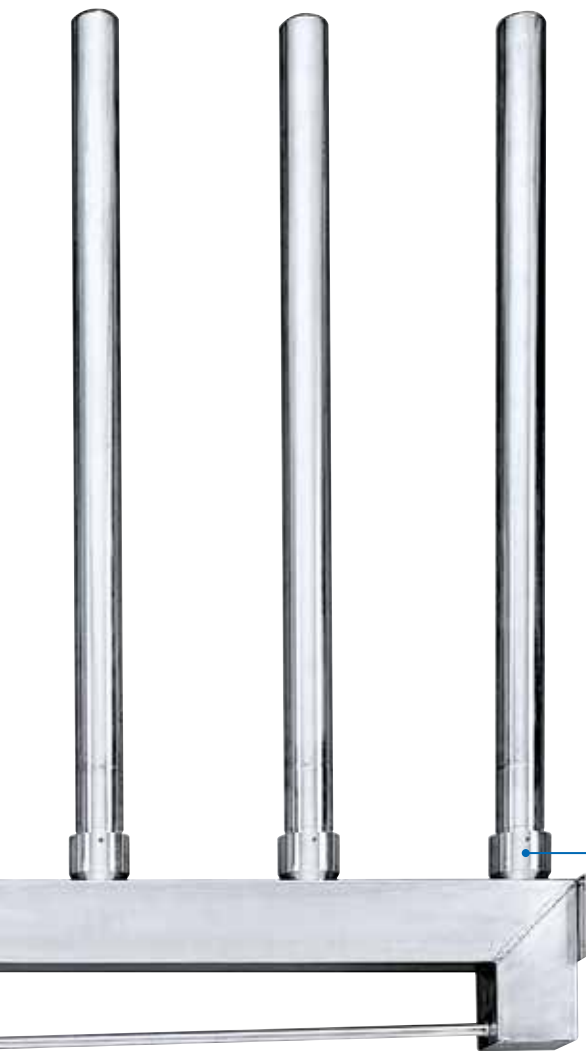
## Pipe connections

Ready to be connected

## Rotary slide valve closes with absolutely tightness

The ceramic valves close with absolute tightness. When the system is switched off they prevent steam from entering the ventilation system and they do this without any additional shut-off device.





#### Condair ESCO design: GGG40

Condair ESCO steam connection unit with reliable GGG40 material quality and extensive area of application in air conditioning systems.

Important components such as:

- flanged joint
  - strainer
  - steam dryer
  - rotary slide valve
  - condensate eliminator
- are already included and do not have to be separately installed.



#### Condair ESCO design: AISI304

Steam connection unit in AISI304 stainless steel quality for special steam mains requirements.

#### Steam distribution system

Condair ESCO steam distribution system with ready-for-connection pipe joints are built as modules. Without threaded sealing they are easy to mount and are watertight.

Primary and secondary condensate cycle

Condair ESCO humidification systems for existing steam set the standards. The key element is the TÜV (German Technical Inspection Association) certified steam connection unit. The functional elements are fully integrated in it and their design guarantees

fault-free steam connection. Costly seals and pipework are superfluous. Installation is calculable, quick and cost-effective. The modular steam distribution system with its patented steam nozzles needs no jacket heating. This effectively prevents

unnecessary energy consumption even during downtimes. All seal points are included in the factory delivery. This simplifies the entire equipment installation significantly without running the risk of leaking pipe connections.

Ceramic rotary slide valve of the Condair ESCO  
**in open position**



Ceramic rotary slide valve of the Condair ESCO  
**in closed position**

# Rotary slide valve closes with absolutely tightness and works precisely

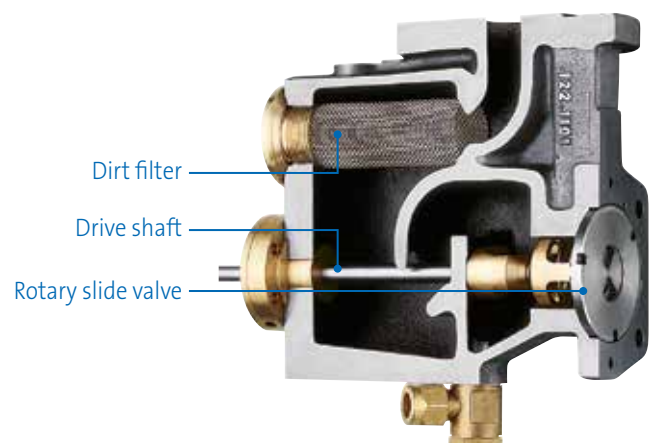
The valve operating mechanism is designed as a rotary drive, supplying high accuracy and reliable operation. The low actuating forces needed by the rotary slide valve and the direct power transmission allow for a compact and space-saving design. Conventional electrical and pneumatic humidity controllers can be connected.

## **Precise steam release based on a linear valve characteristics curve**

The linear characteristic curve of rotary slide valves allows uniform steam release over the entire output range. This ensures that steam release at every operating point coincides with the valve position. In high control requirements this is a decisive advantage.

## **Rotary slide valve closes with absolute tightness**

The ceramic valves close with absolute tightness. When the system is switched off they prevent steam from entering the ventilation system and they do this without any additional shut-off device. Undesirable condensate buildup is thereby safely prevented without additional measures.





# Homogeneous steam distribution and shortest humidification distances

Short humidification distances are decisive factors for reliable and hygienic steam humidification. In air conditioning systems there must be no vapor in air pipe installations. Damp surfaces, water accumulation and hygienic risks would be the consequence.

## Condensate-free steam with patented humidification nozzles

The patented steam nozzles remove steam only from the main flow of the distribution pipes where the steam is hot and condensate-free. In this manner they ensure that the air hoses behind the distribution system remain dry.

Made of solid stainless steel, they work reliably, are long-lasting and resistant to aging, and do not leak.

## Uniform humidity profile through optimal distribution

The structural design of the distribution systems allows for precise steam discharge on the individual nozzles. The two systems, DL40 and DR73, allow individual design for every application and obtain the best values in homogeneity. The injected steam is quickly and evenly absorbed by the air current.



Patented main-flow nozzles

## Tailor-made solution

The Condair ESCO steam humidifier variants facilitate ideal placement in every conceivable system situation. The plan specifications and design of the air conditioning system are decisive factors for the selection of the variant. Even tricky installation conditions can be optimally resolved.

### Condair ESCO DL40

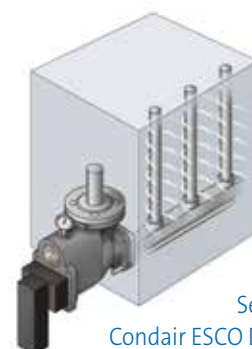
The DL40 can be tailored flexibly to the air duct system using one, two or three horizontal steam distributors. This means considerable freedom in steam output and constructive design of the humidification chamber.

### Condair ESCO DR73

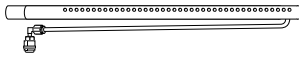
The DR73 is always the best choice, whether you are going for the highest steam outputs or shortest humidification distances. The steam distribution system is individually designed around existing requirements and structurally tailored to the mounting situation. The two-sided steam discharge on the nozzle assemblies allows homogeneous steam distribution over the entire cross-section of the air duct.



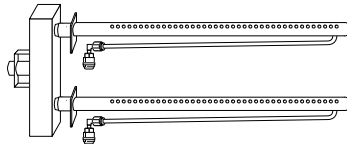
Series:  
Condair ESCO DL40



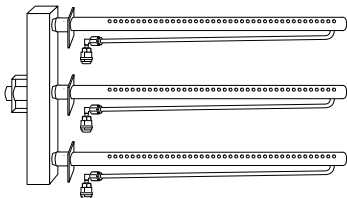
Series:  
Condair ESCO DR73



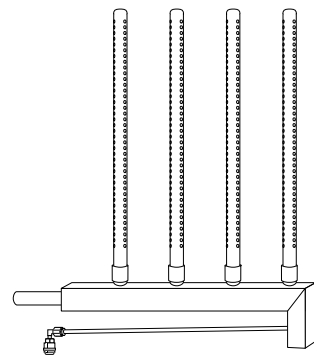
Series DL 40 with single distribution



Series DL 40 with double distribution



Series DL 40 with triple distribution



Series DR 73 with system-specific multiple distribution

## Technical Data

Series	Valve size	Steam pressure [bar(g)]	Steam output max. [kg/h]	Air duct width max. [mm]
DL40	Esco 5	0.2-4.0 bar(g)	127	4,000
	Esco 10	0.2-4.0 bar(g)	250	4,000
	Esco 20	0.2-4.0 bar(g)	500	4,000
DR73	Esco 10	0.2-4.0 bar(g)	250	10,000
	Esco 20	0.2-4.0 bar(g)	500	10,000
	Esco 30	0.2-4.0 bar(g)	2,000	10,000

Tabular overview of expected humidification distances. When the specified applications are individually calculated, this usually results in further improved values which are guaranteed.